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ABSTRACT

Classroom and office space factors are recommended for the 1969-71 biennium. New classroom space factor formulas are presented based on a comparison of--(1) utilization standards of Wisconsin and other states, and (2) alternative standards based on different allocations per seat. The office space factor remains at 135 net assignable square feet per staff occupant with suggestions as to obsolescence and new functions requiring office space. (HH)

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CLASSROOM AND OFFICE SPACE FACTORS USED FOR PROJECTING NEEDS IN WISCONSIN PUBLIC HIGHER EDUCATION FACILITIES

INTRODUCTION: The space factor concept was initiated in the State of Wisconsin in 1965-67. In order to keep pace with an ever-changing educational and technological scene, these guidelines must be reviewed each biennium.

The Technical Advisory Committee has worked very closely with the Staff in reviewing the existing space factors as related to the August 1967 National Standard Classification System for Inventory Procedures. The systems are actively engaged in converting the facilities inventories to the new classifications.

The new system requires a change in certain of the space factor formulas. A room-type category previously known as "Other Active Instructional Space" has been eliminated and service areas are tied to the specific space served. For example, a preparation room serving a classroom now appears as "Classroom Service Area" under classroom room-type. The existing space factors for classrooms do not provide for projecting these kinds of areas.

CLASSROOM SPACE FACTORS: Wisconsin has been using 14 net assignable square feet per seat in classrooms as an average for projecting classroom needs. Other states (Illinois, Indiana, California, Oklahoma) have been using 15 square feet per station. Experience over the past few years has indicated a need to increase this area in the Wisconsin formula. The size of chairs has been increased to accommodate today's youth who are larger in stature as compared to other generations. A number of examples can be sighted where installations made according to old standards either result in a

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loss in the number of seats programmed for a given space or the movable tablet arms cannot be operated unless seriously reduced in size.

The new space factor must provide an allowance for classroom "service areas". Recent studies indicate this should be about 1 square foot per station.

The State of Wisconsin has not done a complete "quality study" of the existing facilities at all public institutions of higher education to determine:

1. Structural Quality: Does the facility pose as a hazard to life, limb and property?
2. Cost: Is it feasible to remodel or cheaper to build new?
3. Educational Adequacy: Does or can the facility meet the needs of the educational functions housed therein?
4. Obsolescence: Based on functional adequacy in reference to usable areas vs. actual measurement and location of the facility.

A methodology spelling out the objectives and procedures for attaining such a study must be developed to determine the kinds of quality mentioned above. A criteria for phasing out the obsolete facilities must also be established. This is no small task and may require many months to develop. If the needs are to be met, new space requirements must be developed immediately in order to provide for the 1969-71 biennia and 10-year preliminary estimates of facility requirements in Wisconsin. This suggests a leadtime for the planning of replacement facilities. At present it appears that from planning to completion requires from three to four years depending upon the complexity of the facility. This assumes that the program statement has been completed prior to the beginning of preliminary plans. An additional allowance of 1/2 square foot of space per seat for one biennia may be necessary to permit phasing out of the obsolete and until a quality study is completed.

Another aspect which must be considered in the development of new guidelines is utilization standards. These are very significant when using student class hours (contact hours) in arriving at a guideline which will properly meet the needs.

A high utilization standard will lower the square feet per student class hour unless other adjustments are made in the formula. Utilization standards are management tools and should be viewed as goals rather than strict requirements.

The following comparison of Wisconsin's utilization standards with other states is presented because of the significance in the alternatives to be presented later.

CLASSROOMS

	Rm. Pds. Per Wk. Per Room	% Station Use
Wisconsin	30	67
Illinois	30	60
Indiana	30	50
Minnesota	30	67
Iowa	none	
Oklahoma	30	67
California	34	66
Michigan State	30	60

Several alternative classroom space factors have been developed for consideration. Each ultimately deals with the average square foot per student class hour (contact hour) based on different allocations per seat or a change in the utilization standards.

Obsolescence is taken into consideration in Items 2 and 3 following for one biennia only.

1. 15 sq. ft. per seat (station) + 1 sq. ft. for service space. (no allowance for obsolescence)

$$\frac{16 \text{ sq. ft. per sta.}}{.67 \times 30\ (20.1)^1} = \frac{.796 \text{ or } .8 \text{ sq. ft. per stud. class hr.}}{}$$

(% sta.use)(rm.pds.per wk.)

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2. 15 sq. ft. per stud. sta. + 1 sq. ft. for service + 1 sq. ft. for obsolescence = 17 sq. ft.

$$\frac{17 \text{ sq. ft. per sta.}}{30 \times .67\ (20.1)} = 17/20.1 = \frac{.846 \text{ sq. ft. per stud. class hr.}}{}$$

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3. 15 sq. ft. per stud. sta. + 1 sq. ft. for service + .5 sq. ft. for obsolescence = 16.5 sq. ft.

$$\frac{16.5 \text{ sq. ft. per sta.}}{.67 \times 30\ (20.1)} = \frac{.821 \text{ sq. ft. per stud. class hr.}}{}$$

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4. To lower utilization requirements would result in the following (as compared to Illinois):

	Rm. Pds.	% Sta. Use
CCHE Stds.	30	67
Illinois Stds.	30	60

$$\frac{15 \text{ sq. ft. per sta.}}{30 \times .60\ (18)} = \frac{.833 \text{ sq. ft. per stud class hr.}}{}$$

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5. Current CCHE Utilization Stds. at 15 sq. ft. per sta.

$$\frac{15 \text{ sq. ft. per sta.}}{30 \times .67} = \frac{.746 \text{ sq. ft. per stud. class hr.}}{}$$

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[1] CCHE Stds. for classroom use

As a point of information one might compare other states with Wisconsin on the sq. ft. allocation per student class hour.

State	Sq. Ft. Per Stud. Class Hr.	
Illinois	.833	(lower utilization std.)
Indiana	1.0	(lower utilization std.)
California	.67	
Iowa	none	
Minnesota	.75	
Ohio	.80	
Michigan State Univ.	.833	
Wisconsin CCHE	.821	(recommended)

The resulting classroom space factor formula would read as follows:

(1) $\frac{\text{Sq. Ft. Per Stud. Sta.}}{\text{CCHE Utilization Stds.}}$ = Sq. Ft. Per Stud. Class Hr.

(2) $\frac{\text{Total No. of Stud. Class Hrs.}}{\text{Enrollment}}$ = Ave. Per Stud. Class Hrs.

(3) Ave. Class Hrs. Per Stud. x Projected Enrollment = Total Stud. Class Hrs.

(4) Total Stud. Class Hr. x (.821) Sq. Ft. Per Stud. Class Hr. = Total Sq. Ft. of Classroom Space Required.

(5) Total Sq. Ft. Required Minus Total Sq. Ft. Available* = Deficit or Overage of Space.

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*Available space includes:

1. Existing area minus temp., rented, or razed.
2. Additional added-in space includes authorized or under construction.

OFFICE SPACE FACTORS (Net Assignable Square Feet): Wisconsin has been using 135 NASF per FTE Staff (faculty and civil service) to provide (office plus service) office space, mimeo and conference rooms, etc. as an over-all average. This does not mean that each person will be receiving an office of 135 NASF. Areas required by department will vary by the function of the personnel involved. It appears that the office factor is proving satisfactory with certain exceptions:

1. No allowance has been made for obsolescence. This should be reflected in any quality study which may be undertaken.

2. Further study of the needs for Administration, Extension and Public Service, and Research must be pursued to determine if these kinds of functions demand different space requirements.

IT IS RECOMMENDED THAT:

1. Classroom Space Factors: The following classroom space factor be adopted for the Public Higher Education Institutions in Wisconsin for the 1969-71 biennia only.

   (All figures in Net Assignable Square Feet)

   15 sq. ft. per stud. sta. + 1 sq. ft. service + 5 sq. ft. for obsolescence = 16.5 NASF.

   $$\frac{16.5 \text{ sq. ft. per stud. sta.}}{.67 \times 30\ (20.1)} = \frac{.821 \text{ sq. ft. per}}{\text{stud. class hr.}}$$

2. Staff Office Space Factors:

   2.1 135 NASF per FTE Staff be adopted as the over-all office space factor for Public Higher Education Institutions in Wisconsin for the 1969-71 biennia.

   2.2 The staff, working with the Facilities Advisory Committee, study the office needs in the areas of Administration, Extension and Public Service, and Research.

3. A quality study be implemented to determine obsolescence by building and room type in terms of:

   3.1 Structural Quality

   3.2 Cost of Remodeling vs. Building New

   3.3 Educational Adequacy

   3.4 Obsolescence